



# SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 21 75 12 84

## Classification of the application (IPC):

C07K 14/71, A61K 38/00, A61P 11/00, A61P 13/12, A61P 19/08, A61P 21/06, A61P 7/06, A61P 9/12

## Technical fields searched (IPC):

C07K

### DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X	WO 2018067874 A1 (ACCELERON PHARMA INC [US]) 12 April 2018 (2018-04-12) * the whole document *	1-20

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search The Hague	Date of completion of the search 30 August 2024	Examiner Surdej, Patrick
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### CATEGORY OF CITED DOCUMENTS

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|---|--|
| X: particularly relevant if taken alone   | P: intermediate document   |
| Y: particularly relevant if combined with another document of the same category | T: theory or principle underlying the invention                        |
| A: technological background   | E: earlier patent document, but published on, or after the filing date |
| O: non-written disclosure   | D: document cited in the application                                   |
|   | L: document cited for other reasons                                    |
| & : member of the same patent family, corresponding document                    |  |

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### LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

**1. claims: 1-4, 6-20(all partially)**

A polypeptide comprising a variant ActRIIB amino acid sequence that is at least 90% identical to an amino acid sequence that begins at any one of amino acids 20-29 (amino acid residues 20, 21, 22, 23, 24, 25, 26, 27, 28, or 29) of SEQ ID NO: 2 and ends at any one of amino acids 109-134 (amino acid residues 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, or 134) of SEQ ID NO: 2, and wherein the variant ActRIIB amino acid sequence comprises the amino acid substitution at a position A24 of SEQ ID NO: 2

**2. claims: 1-4, 6-20(all partially)**

A polypeptide comprising a variant ActRIIB amino acid sequence that is at least 90% identical to an amino acid sequence that begins at any one of amino acids 20-29 (amino acid residues 20, 21, 22, 23, 24, 25, 26, 27, 28, or 29) of SEQ ID NO: 2 and ends at any one of amino acids 109-134 (amino acid residues 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, or 134) of SEQ ID NO: 2, and wherein the variant ActRIIB amino acid sequence comprises one or more amino acid substitutions at a position of SEQ ID NO: 2 selected from the group consisting of, respectively: S26, N35, E37, L38, R40, S44, L46, E50, E52, Q53, D54, K55, R56, L57, Y60, R64, N65, S67, G68, K74, W78, L79, D80

**3. claims: 5(completely); 1-4, 6-20(all partially)**

A polypeptide comprising a variant ActRIIB amino acid sequence that is at least 90% identical to an amino acid sequence that begins at any one of amino acids 20-29 (amino acid residues 20, 21, 22, 23, 24, 25, 26, 27, 28, or 29) of SEQ ID NO: 2 and ends at any one of amino acids 109-134 (amino acid residues 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, or 134) of SEQ ID NO: 2, and wherein the variant ActRIIB amino acid sequence comprises the amino acid substitution at a position F82 of SEQ ID NO: 2

**4. claims: 1-4, 6-20(all partially)**

A polypeptide comprising a variant ActRIIB amino acid sequence that is at least 90% identical to an amino acid sequence that begins at any one of amino acids 20-29 (amino acid residues 20, 21, 22, 23, 24, 25, 26, 27, 28, or 29) of SEQ ID NO: 2 and ends at any one of amino acids 109-134 (amino acid residues 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, or 134) of SEQ ID NO: 2, and wherein the variant ActRIIB amino acid sequence comprises one or more amino acid substitutions at a position of SEQ ID NO: 2 selected from the group consisting of, respectively: N83, T93, E94, Q98, V99, E105, E106, F108, E111, R112, A119, G120, E123, P129, P130, and A132

Only part of the further search fees have been paid within the fixed time limit. The present (supplementary) European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims: 5(completely); 1-4, 6-20(partially)

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search The Hague	Date of completion of the search 30 August 2024	Examiner Surdej, Patrick
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### CATEGORY OF CITED DOCUMENTS

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ANNEX TO SUPPLEMENTARY EUROPEAN  
SEARCH REPORT

Application number:  
EP 21 75 12 84

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on 30-08-2024  
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Patent document cited in search report		Publication date	Patent family member(s)		Publication date
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